<u>**AMENDMENTS TO THE CLAIMS**</u>

Please amend Claims 2-5, 7-9, 13-15, 18, and 19 as follows, without prejudice or disclaimer to continued examination on the merits:

1.   (original): A sampling method for shortening readout time and reducing lag in amorphous silicon flat panel x-ray detectors, the method comprising the steps:

(a)   activating a reset switch to discharge any residual signal being held in a feedback capacitor;

(b)   deactivating the reset switch;

(c)   activating a field effect transistor;

(d)   sampling an electrical signal from the amorphous silicon flat panel x-ray detector, while the field effect transistor is activated;

(e)   activating a reset switch, after the electrical signal has been sampled and while the field effect transistor is still activated, to discharge any residual signal being held in the feedback capacitor;

(f)   deactivating the field effect transistor, while the reset switch is still activated;

(g)   deactivating the reset switch; and

(h)   repeating steps (c)–(g) as necessary to obtain a predetermined radiographic image.

2.   (currently amended): The sampling method of claim 1, wherein the electrical signal is sampled while the field effect transistor is activated ~~in a manner that eliminates,~~ thereby eliminating the need for FET-off settling time before sampling.

3.   (currently amended): The sampling method of claim 1, wherein the field effect transistor is deactivated while the reset switch is activated ~~in a manner that reduces,~~ thereby reducing lag, as compared to the lag in conventional amorphous silicon flat panel x-ray detectors.

4.   (currently amended):   The sampling method of claim 1, wherein the ~~sampling method allows frame rates~~ <u>frame rate is</u> in excess of 30 frames per second ~~to be achieved~~.

5.   (currently amended):   The sampling method of claim 1, wherein the sampling ~~method requires less line time than conventional amorphous silicon flat panel x-ray detector sampling methods~~ <u>time is less that 1/30th of a second per frame</u>.

6.   (original):   A system for shortening readout time and reducing lag in amorphous silicon flat panel x-ray detectors, the system comprising:

     (a)   a means for activating a reset switch to discharge any residual signal being held in a feedback capacitor;

     (b)   a means for deactivating the reset switch;

     (c)   a means for activating a field effect transistor;

     (d)   a means for sampling an electrical signal from the amorphous silicon flat panel x-ray detector, while the field effect transistor is activated;

     (e)   a means for activating a reset switch, after the electrical signal has been sampled and while the field effect transistor is still activated, to discharge any residual signal being held in the feedback capacitor;

     (f)   a means for deactivating the field effect transistor, while the reset switch is still activated;

     (g)   a means for deactivating the reset switch; and

     (h)   a means for repeating steps (c)—(g) as necessary to obtain a predetermined radiographic image.

7.   (currently amended):   The system of claim 6, wherein the electrical signal is sampled while the field effect transistor is activated ~~in a manner that eliminates,~~ <u>thereby eliminating</u> the need for FET-off settling time before sampling.

8.   (currently amended): The system of claim 6, wherein the field effect transistor is deactivated while the reset switch is activated ~~in a manner that reduces~~, thereby reducing lag, as compared to the lag in conventional amorphous silicon flat panel x-ray detectors.

9.   (currently amended): The system of claim 6, wherein the ~~sampling method allows frame rates~~ frame rate is in excess of 30 frames per second ~~to be achieved~~.

10.   (canceled)

11.   (original): A sampling method for shortening readout time and reducing lag in amorphous silicon flat panel x-ray detectors, the method comprising: obtaining an electrical sample during a FET-on period, switching to a FET-off period after the electrical sample is obtained, and allowing a RESET-on period to overlap both the FET-on period and the FET-off period for a predetermined period of time.

12.   (original): The sampling method of claim 11, wherein the electrical signal is sampled during the FET-on period so that there is no need for the FET-off period before obtaining the electrical sample.

13.   (currently amended): The sampling method of claim 11, wherein the FET-off period begins during the RESET-on period to ~~reduce~~ control lag~~, as compared to the lag in conventional amorphous silicon flat panel x-ray detectors~~.

14.   (currently amended): The sampling method of claim 11, wherein the ~~sampling method allows frame rates~~ frame rate is in excess of 30 frames per second ~~to be achieved~~.

15.   (currently amended): The sampling method of claim 11, wherein the sampling ~~method requires less line time than conventional amorphous silicon flat panel x-ray detector sampling methods~~ time is less that $1/30^{th}$ of a second per frame.

16.   (original): A system for shortening readout time and reducing lag in amorphous silicon flat panel x-ray detectors, the system comprising: a means for obtaining an electrical sample during a FET-on period, a means for switching to a FET-off period after the electrical sample is obtained, and a means for allowing a RESET-on period to overlap both the FET-on period and the FET-off period for a predetermined period of time.

17.   (original): The system of claim 16, wherein the electrical signal is sampled during the FET-on period so that there is no need for the FET-off period before obtaining the electrical sample.

18.   (currently amended): The system of claim 16, wherein the FET-off period begins during the RESET-on period to ~~reduce~~ control lag~~, as compared to the lag in conventional amorphous silicon flat panel x-ray detectors~~.

19.   (currently amended): The system of claim 16, wherein the ~~sampling method allows frame rates~~ frame rate is in excess of 30 frames per second ~~to be achieved~~.

20.   (canceled)

        Please cancel Claims 10 and 20, as indicated above.